Contents

Number 1 • January–February 1987

1 **A Note From the Editor**

2 **Perspectives**

Original Articles

3 Longitudinal Study of Lung Mechanics in Normal Infants
I.B. Masters, J. Seidenberg, I. Hudson, P.D. Phelan, and A. Olinsky

8 Effect of Cisapride on Gastroesophageal Reflux in Children With Chronic Bronchopulmonary Disease: A Double-Blind Cross-Over pH-Monitoring Study
Zimbu N. Saye, Pierre Ph. Forget, and Fernand Geubelle

13 Ventilatory Response to Inspired Carbon Dioxide in Premature Infants Recovering From Intraventricular Hemorrhage
Mujahid Anwar, Maria Fort, Fran Marotta, Harry Mondestin, I. Mark Hiatt, and Thomas Hegyi

19 Exhalation Time Effects on Arterial and Venous Blood Oxygen Content and Arterial P_{CO_2} During High Frequency Jet Ventilation of Surfactant-Depleted Cats
Jerrilyn Johnston, Jeffrey R. Carlstrom, Felipe Gonzalez, and Peter Richardson

24 Determination of Right Ventricular Ejection Fraction in Children With Cystic Fibrosis
A. Piepsz, H.R. Ham, E. Millet, and I. Dab

29 Lung Function in Infancy and Childhood Following Neonatal Intensive Care
I. Arad, E. Bar-Yishay, F. Eyal, S. Gross, and S. Godfrey

34 Bronchodilating Activity of Oral Clenbuterol in Asthmatic Children After Single Administration of Different Dosages
A.L. Boner, D. Bennati, C. Castellani, L. Sette, and M. Schiassi

38 Lung Function and Bronchial Responsiveness in Children Who Had Infantile Bronchiolitis
E.J. Duiverman, H.J. Neijens, R. van Strik, M.J. Affourtit, and K.F. Kerrebijn

45 Partitioning the Respiratory Effects of Airway Citric Acid and Normal Saline in Lambs
Alastair A. Hutchison, Donald Caton, Ronald G. Thomas, and Richard L. Bucciarelli

51 Human Fetal Lung Changes Associated With Maternal Smoking During Pregnancy
M.F. Chen, G. Kimizuka, and N.S. Wang

59 **Book Review**

60 **Pediatric Pulmonology News**

61 **Addendum**

Number 2 • March–April 1987

63 **A Note From the Editor**

64 **Perspectives**

65 **Guest Editorial**

Original Articles

67 Decreased Phosphatidyl Choline Content in Bronchoalveolar Lavage Fluids of Children With Bronchopulmonary Dysplasia: A Preliminary Investigation
A. Clement, J. Masliah, B. Housset, J. Just, J. Garcia, A. Grimfeld, and G. Tournier

71 Improved Accuracy of the Occlusion Technique for Assessing Total Respiratory Compliance in Infants
Janet Stocks, Ursula Nöthen, Pat Sutherland, David Hatch, and Peter Helms

78 Comparison of the Occlusion and Inflation Techniques for Measuring Total Respiratory Compliance in Sick, Intubated Infants
D.P. Heaf, H. Turner, J. Stocks, and P. Helms

83 Effects of Nebulized Fenoterol, Associated With Ipratropium or Steroids, on the Heart Rate of Infants Under One Year of Age With Acute Wheezing
Javier Mallol, Ricardo Muñoz, Homero Puppo, Victor Ulloa, Olivia Toro, Guido Girardi, and Luis Barrueto

86 Recurrent Aspiration in Children: Lipid-Laden Alveolar Macrophage Quantitation
John L. Colombo and Timothy K. Hallberg

90 Use of Caffeine in Infants Unresponsive to Theophylline in Apnea of Prematurity
J.M. Davis, A.R. Spitzer, J.L. Stefano, V. Bhutani, and W.W. Fox

94 Vasodilatory Effect of Aerosol Histamine During Pulmonary Vasoconstriction in the Unanesthetized Sheep
Arlene A. Stecenko, Peter L. Lefferts, John A. Mitchell, James R. Snapper, and Kenneth L. Brigham

101 Therapeutic Evaluation of Piperacillin for Acute Pulmonary Exacerbations in Cystic Fibrosis
Michael D. Reed, Robert C. Stern, Carolyn M. Myers, Jeffrey D. Klinger, Toyoko S. Yamashita, and Jeffrey L. Blumer

110 Effects of Adenosine and Xanthine Derivatives on Breathing During Acute Hypoxia in the Anesthetized Newborn Piglet
Robert A. Darnall and R. Dean Bruce

117 Circulating 5-Hydroxytryptamine Concentrations in Preterm Newborns
R.E. Schumacher, P.M. Farrell, and E.B. Olson, Jr.

State of the Art Review

123 Measurements of Respiratory Mechanics in the Newborn: A Simple Approach
Jacopo P. Mortola and Marina Saetta

Case Report

131 Changes in Cerebrospinal Fluid Homovanillic Acid in Children With Ondine's Curse
J. Hedner, T. Hedner, G.R. Breese, K.H. Lundell, D. Lundberg, N.R. Lundström, E. Østergaard, T.J. McCown, and R.A. Mueller

136

137

139

141

145

149

153

161

166

173

179

185

197

200

202

203

206

136 **Book Review**

137 **Selected Abstracts**

139 **Pediatric Pulmonary News**

Number 3 • May–June 1987

141 **Guest Editorials**

Original Articles

145 Maximal Static Pressures and Lung Volumes in Young Female Swimmers: One Year Follow-Up
Raezelle Zinman and Claude Gaultier

149 Effect of Oxygen on Right Ventricular Performance Evaluated by Radionuclide Angiography in Two Young Patients With Chronic Lung Disease
Brad E. Alpert, Margaret A. Gainey, Daniel V. Schidlow, and Marie A. Capitanio

153 Acute Bronchiolitis: Predisposing Factors and Characterization of Infants at Risk
Kai-Håkon Carlsen, Stig Larsen, Øivind Bjerve, and Jens Leegaard

161 Sodium Cromoglycate and Carbachol-Induced Bronchoprovocation in Asthmatic Children
A. Barbato, F. Pisetta, P. Mesirca, A. Ragusa, and F. Zacchello

166 Physical Exercise Program for Children With Bronchial Asthma
Klára Szentágothai, István Gyene, Miklós Szócska, and Pál Osváth

173 Trial of an Intervention to Reduce Passive Smoking in Infancy
Alistair Woodward, Neville Owen, Nick Grgurinovich, Felicity Griffith, and Helen Linke

179 Is There a Place for Rigid Bronchoscopy in the Management of Pediatric Lung Disease?
S. Godfrey, C. Springer, Ch. Maayan, A. Avital, E. Vatashky, and B. Beilin

Conference Report

185 The Aspen Conference on Bronchopulmonary Dysplasia. Institute for Pediatric Medical Education, June 29–July 4, 1986.
Steven H. Abman with Eduardo Bancalari

Case Report

197 Fatality Following Fiberoptic Bronchoscopy in a Two-Year-Old Child
Jeffrey S. Wagener

200 **Correspondence**

202 **Book Review**

203 **Selected Abstracts**

206 **Pediatric Pulmonology News**

Number 4 • July–August 1987

207 **Perspectives**

Original Articles

208 Gastroesophageal Reflux and Unexplained Chronic Respiratory Disease in Infants and Children
A. Malfroot, Y. Vandenplas, M. Verlinden, A. Piepsz, and I. Dab

214 Compliance of the Total Respiratory System in Healthy Preterm and Full-Term Newborns
M. Migdal, E. Dreizzen, J.P. Praud, M. Vial, M. Dehan, B. Chambille, and Cl. Gaultier

219 Effect of Early Furosemide Administration in Neonates With Respiratory Distress Syndrome
Jaques Belik, Alan R. Spitzer, Bernard J. Clark, Michael H. Gewitz, and William W. Fox

226 Hypercarbic Ventilatory Responses of Infants at Risk for SIDS
J. Michael Coleman, Mark C. Mammel, Christine Reardon, and Stephen J. Boros

231 Changing Patterns in Neonatal Respiratory Diseases
D.J. Field, A.D. Milner, I.E. Hopkin, and R.J. Madeley

236 Pulmonary Function Following Varicella-Zoster Pneumonia in Children With Leukemia
Dennis C. Stokes, Sandor Feldman, Shyamal K. Sanyal, and Paul W. Mackert

242 Pulmonary Function at 1 Year of Age in Survivors of Neonatal Respiratory Distress: A Multivariate Analysis of Factors Associated With Sequelae
G. Moriette, C. Gaudebout, A. Clement, M. Boule, B. Bion, J.P. Relier, and C. Gaultier

251 Cold Air Challenge in Children With Asthma
J. Reisman, L. Mappa, F. de Benedictis, J. McLaughlin, and H. Levison

255 Normal Values of Maximal Inspiratory and Expiratory Pressures With a Portable Apparatus in Children, Adolescents, and Young Adults
Amir Szeinberg, Jacque E. Marcotte, Hector Roizin, Catherine Mindorff, Sandra England, Elvan Tabachnik, and Henry Levison

259 Effect of Sleep State on Chest Wall Movements and Gas Exchange in Infants With Resolving Bronchopulmonary Dysplasia
Ellen S. Rome, Martha J. Miller, David A. Goldthwait, Ivan O. Osorio, Avroy A. Fanaroff, and Richard J. Martin

State of the Art Review

264 Asthma: A Pediatric Pulmonary Disease and a Changing Concept
Peter König

Case Reports

276 Infected Thymic Cyst: An Unusual Cause of Respiratory Distress in a Child
George G. Youngson, Sigmund H. Ein, William R. Geddie, and Ernest Cutz

280 Clinical *Candida* Supraglottitis in an Infant With AIDS-Related Complex
Michael R. Bye, Anthony Palomba, Larry Bernstein, and Kiran Shah

282 **Correspondence**

283 **Selected Abstracts**

285 **Pediatric Pulmonology News**

Supplement 1 • 1987
1987 North American Cystic Fibrosis Conference
Toronto, Ontario, Canada
October 14–17, 1987

1 **About This Volume**

2 **Program Committee**

3 **Program**

23 **Plenary and Symposia Session Summaries**

108 **Poster Session Abstracts**

148 **Author-Abstract Index**

Number 5 • September–October 1987

287 **Perspectives**

Original Articles

288 Are Sex, Age at Diagnosis, or Mode of Presentation Prognostic Factors for Cystic Fibrosis?
Irene Hudson and P.D. Phelan

298 Use of Nebulized Bronchodilators in Infants Under 1 Year of Age: Analysis of Four Forms of Therapy
Javier Mallol, Luis Barrueto, Guido Girardi, Riccardo Muñoz, Homero Puppo, Victor Ulloa, Olivia Toro, and Fernando Quevedo

304 Respiratory Syncytial Virus Infections in SR Croatia, Yugoslavia
Gordana Mlinarić-Galinović, Irena Ugrčić, and Jadranka Božikov

309 Pulmonary Mechanics in Normal Infants and Young Children During First 5 Years of Life
Tilo Gerhardt, Dorothy Hehre, Rosalyn Feller, Linda Reifenberg, and Eduardo Bancalari

317 Recovery From Hypopnea in Preterm Lambs: Effects of Breathing Air or Oxygen
Alastair A. Hutchison

324 Effect of Pulmonary Hypertension on Lung Compliance in Newborn Lambs
A. John Caeton, Boyd W. Goetzman, Stephen H. Bennett, and Jay M. Milstein

328 Lung Growth and Maturation in Experimental Oligohydramnios in the Rat
Karen G. Blachford and William M. Thurlbeck

State of the Art Review

334 Cystic Fibrosis: A Review of Pulmonary Infections and Interventions
Mary Jane Thomassen, Catherine A. Demko, and Carl F. Doershuk

Therapeutic Methods

352 Bronchodilator Effect of Fenoterol and Ipratropium Bromide in Infants With Acute Wheezing: Use of MDI With a Spacer Device
Javier Mallol, Luis Barrueto, Guido Girardi, and Olivia Toro

357 Performance of Respirators at Fast Rates Commonly Used in Neonatal Intensive Care Units
Anne Greenough and F. Greenall

Case Reports

362 Pneumothorax: New Manifestation of *Chlamydia trachomatis* Infection in Infancy
Marc H. Lebel, Andre Lamarre, and Elisabeth Rousseau

364 Bronchoscopic Evaluation of Airway Obstruction in Campomelic Dysplasia
Roni Grad, Paul H. Sammut, John R. Britton, Paul Goodrich, H. Eugene Hoyme, and Nancy N. Dambro

Conference Report

368 Fourth Conference on High Frequency Ventilation of Infants, April 8–11, 1987, Snowbird Ski Resort, Utah
Stephen R. Karl, Guest Editor

378 **Book Review**

379 **Selected Abstracts**

382 **Pediatric Pulmonology News**

383 **Erratum**

Number 6 • November–December 1987

385 **Perspectives**

Original Articles

386 Pulmonary Vascular Extraction of Circulating Norepinephrine in Infants With Bronchopulmonary Dysplasia
Steven H. Abman, Michael S. Schaffer, James Wiggins, Reginald Washington, Marilyn Manco-Johnson, and Robert R. Wolfe

392 Sequential Pulmonary Function Measurements in Very Low-Birth Weight Infants During the First Week of Life
Endla K. Anday, Anne Godart-Wlodavar, and Maria Delivoria-Papadopoulos

400 Measurement of Respiratory Mechanics Using the Siemens Servo Ventilator 900C
Peter D. Sly, Jason H.T. Bates, and J. Milic-Emili

406 Rapid Assessment of Ventilation by Measurement of Carbon Dioxide Elimination During High-Frequency Ventilation of Kittens
David W. Smith, Lorry R. Frankel, John G. Walker, Eugene Y. Cheng, Keith S. Meredith, Frederick G. Mihm, and Ronald L. Ariagno

413 Changes in Lung Tissue Fibronectin Content and Synthesis During Postnatal Lung Growth
Deborah J. Plumb, Basim A. Dubaybo, and Lyn A. Thet

420 Stridor and Gastroesophageal Reflux: Diagnostic Use of Intraluminal Esophageal Acid Perfusion (Bernstein Test)
Susan R. Orenstein, Samuel A. Kocoshis, David M. Orenstein, and Roy Proujansky

425 Diagnostic Bronchoalveolar Lavage in Children With AIDS
Michael R. Bye, Larry Bernstein, Kiran Shah, Maadhava Ellaurie, and Arye Rubenstein

State of the Art Review

429 Obstructive Sleep Apnea and Its Treatment in Children: Areas of Agreement and Controversy
Christian Guilleminault

Case Reports

437 Bronchiolar Obstruction Associated With Repeated Aspiration of Vegetable Material in Two Children With Cerebral Palsy
Charles L. Gadol, Vijay V. Joshi, and Eun Young Lee

440 Long-Term Nasopharyngeal Intubation in Obstructive Sleep Apnea
Karl H. Karlson, Jr., Bashir A. Chaudhary, and Edward S. Porubsky

Clinicopathologic Review

443 Airway Damage and Mechanical Ventilation: A Review and Commentary
Mark C. Mammel and Stephen J. Boros

Conference Report

448 Sixth Annual Conference on Apnea of Infancy, Annenberg Center for Health Sciences at Eisenhower, Rancho Mirage, California, January 28–30, 1988

459 **Book Review**

460 **Pediatric Pulmonology News**

461 **Acknowledgments**

463 **Author Index to Volume 3**

465 **Subject Index to Volume 3**